

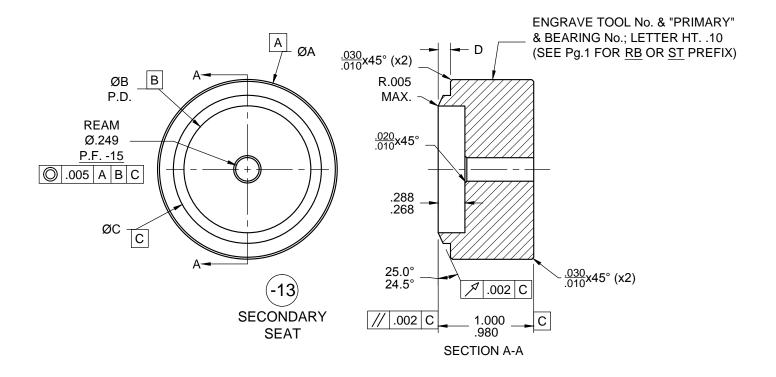
TOOL#	ØA +.000 002	B +.010 010	PIN TYPE	QTY.		MATERIA	L
RBST2345	.372	.656	III	2	1018	RND. BAR	Ø1/2 x 3/4
RBST2369	.747	.656	Ш	2	1018	RND. BAR	Ø7/8 x 3/4
						•	

NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).

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	® RED	BAF	SN	MA	CHI	NE		
TITLE	RBS	ST230	0	SERI	ES			
	SWAGING	TOOL	ا ز_	_OCA1	ΓING	PIN		
DWG NO	TOOL#	: (se	е	char	\t)-:	15	REV 3	
	INLESS OTHERWISE DIMENSIONS ARE I		⊢	DRAWN BY: APPROVED	PER	RITT		
DECIN .XXX	.005 FRACTI	ONS ± 1/32	1	HEAT TREAT FINISH	DI ACI	/ UVIDE		
.X	LESS OTHERWISE S	GLES ±.5°		FINISH BLACK DXIDE USED ON BEARING				
	1. BREAK ALL SHARF 015 x 45° PR .015	EDGES		SEE Pg. 1				
2. DI	MENSIONAL LIMITS APPLY	AFTER PLATING						
SCALE	2TM	DATE C	-27	7-NA	SHEET	9 of	9	

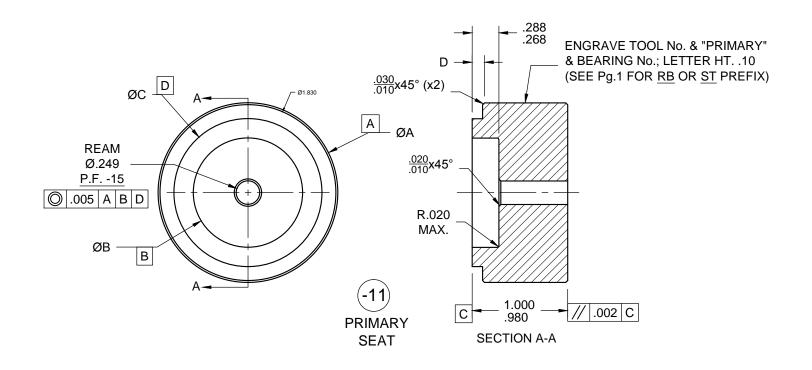


TOOL#	ØA +.000 020	ØB +.005 000	ØC +.002 002	D +.002 002		MATERIA	L
RBST2345	1.75	1.278	0	0	4140 Q&T	RND. BAR	Ø1-3/4 x 1-1/8
RBST2369	2.125	1.806	0	0	4140 Q&T	RND. BAR	Ø2-1/8 x 1-1/8
							·

NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).

RED BARN	N MACHINE			
RBST2300				
SWAGING TOOL; S	DD/			
TOOL# (see	chart)-13 3			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:	DRAWN BY: PERRITT APPROVED			
DECIMALS .XXX ± .005 FRACTIONS + 1/32	HEAT TREAT FINISH DI ACK TIVIDE			
.XX ± .01 ANGLES ±.5° UNLESS OTHERWISE SPECIFIED	USED ON BEARING			
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R	SEE Pg. 1			
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	laurer-			
SCALE NTS DATE 6-2	7-08 SHEET 8 of 9			

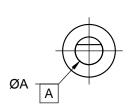


TOOL#	ØA +.000 020	ØB +.005 005	ØC +.002 002	D +.002 002		MATERIAL				
RBST2345	1.750	1.188	0	0	4140 Q&T	RND. BAR	Ø1-3/4 x 1-1/8			
RBST2369	2.125	1.687	0	0	4140 Q&T	RND. BAR	Ø2-1/8 x 1-1/8			

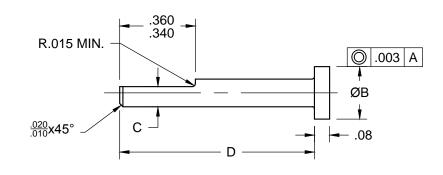
NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).

	® R	$\equiv \mathbb{D}$	Br	4R1		MΑ	CH	INE		
TITLE	0. 44.5	RBS								
	SWAG:	<u>lNG</u>		<u> </u>	<u> </u>	<u>IMA</u>	<u>RY</u>	<u>SFAT</u>		
DWG NO.	ΤO	OL#	(9	566	\subset	har	^t)-	-11	REV 3	
U	NLESS OTHE DIMENSION			DRA	WN BY:	PE	RRITT			
	NCES ON:	S AIRE IIV	IIVOIIL	.0	APPROVED					
DECIM .XXX ±	. 005	FRACTIO	NS ± 1	/32	HEAT TREA	·TΤ				
.xx	.01		ES ±.		FINIS	SH	BLA	CK DXID	E	
	I ILESS OTHER	RWISE SP	ECIFIE	ED.		US	SED ON B	EARING		
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R						SEE Pg. 1				
2. DIN	.015 X 45° IENSIONAL LIMIT			TING					Ţ	
SCALE	2.TN	D	ATE	6-2	7-	08	SHEET	7 of	, 9	



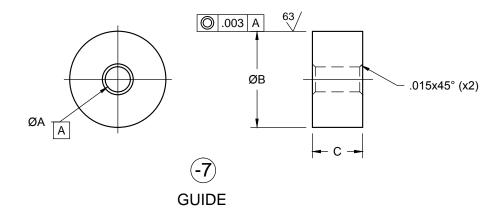




TOOL#	ØA +.000 001	ØB +.005 005	C +.010 010	D +.020 020	MATERIAL
RBST2345	.129	.188	.104	.880	MCMASTER-CARR PN: 98378A909
RBST2369	.129	.188	.104	1.000	MCMASTER-CARR PN: 98378A909

<u>NOTES</u>
1. BREAK ALL SHARP CORNERS (.015/.03).

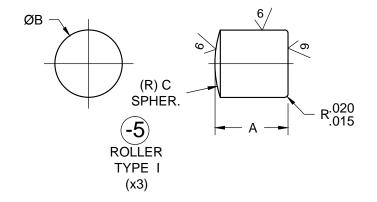
	® RED	BAF	SN	МΔ	CH:	INE		
TITLE		ST230 AGING						
DWG NO	TOOL	# (se	е.	cha	rt)-	-9	REV 3	
	INLESS OTHERWISI DIMENSIONS ARE ANCES ON:		L	DRAWN BY: APPROVED	PE	RRITT		
DECIN .XXX	IALS .005 FRACT	TIONS ± 1/32 IGLES ±.5°	P	HEAT TREAT FINISH SPEC		K DXID	Ε	
	NLESS OTHERWISE 1. BREAK ALL SHAR	P EDGES	-	USED ON BEARING SEE Pg. 1				
	015 x 45° PR .01. MENSIONAL LIMITS APPLY	AFTER PLATING	_					
SCALE	2TM	DATE	-27	7_02	SHEET	6 01	: a l	

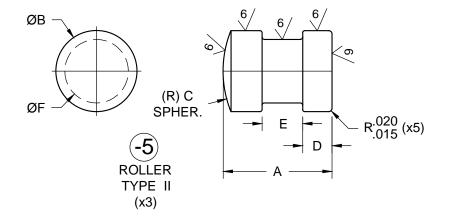


TOOL#	ØA +.001 001	ØB +.000 002	C +.000 010	MATERIAL					
RBST2345	.131	.372	.330	BRONZE RND. BAR	Ø3/8x 1/2				
RBST2369	.131	.747	.375	BRONZE RND. BAR	Ø3/4x 1/2				

<u>NOTES</u>
1. BREAK ALL SHARP CORNERS (.015/.03).

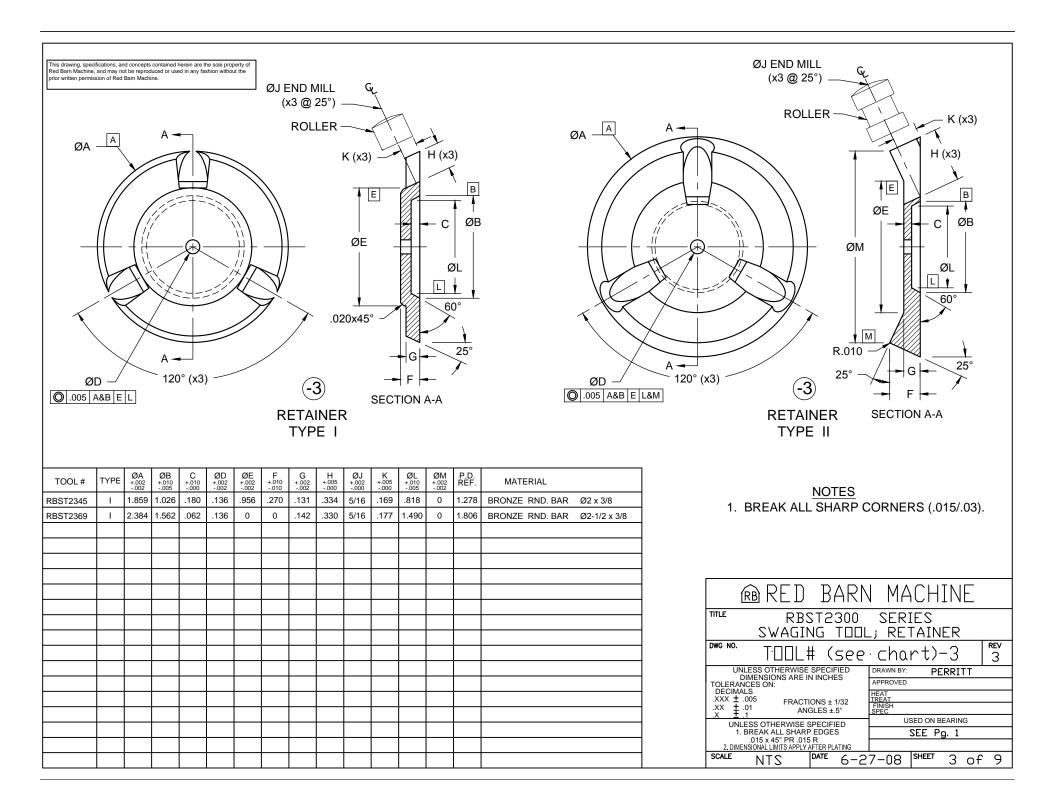
	® RED	BARN	1 MA	CHI	NE		
TITLE		ST2300 SING TO					
DWG NO.	TOOLi	# (see	·cha	rt)-	7	REV 3	
TOLER	INLESS OTHERWISE DIMENSIONS ARE II ANCES ON:		DRAWN BY: PERRITT APPROVED				
DECIN .XXX ± .XX ± .X	.005 FRACTI	IONS ± 1/32 GLES ±.5°	HEAT TREAT FINISH SPEC				
	NLESS OTHERWISE S	EDGES	USED ON BEARING SEE Pg. 1				
2. DII	.015 x 45° PR .015 MENSIONAL LIMITS APPLY	AFTER PLATING	7 00	SHEET			
JUALL	2TN	1501- P-5	7-08	J-11-E1	5 of	9	





TOOL#	TYPE	A +.001 001	ØB +.001 001	(R) C +.002 002	D +.001 001	+.005 000	ØF +.000 005	MATERIAL			
RBST2345	I	.335	.310	.500	0	0	0	.310 MINUS	GAGE PIN	MSC#89031009	
RBST2369	I	.335	.310	.500	0	0	0	.310 MINUS	GAGE PIN	MSC#89031009	

® RE]) B <i>e</i>	4RN	I MA	CH:	IN	Ε	
TITLE R	BST23	300	SER]	[ES			
SWAGING	TOOL	.; RE	<u> ILLER</u>	((<u>Y T Ç</u>	<u>′. 3</u>)
DWG NO. T.	_# (see	· cha	rt)-	-5		REV 3
UNLESS OTHERW DIMENSIONS AR		DRAWN BY:	PE	RRI	ГТ		
TOLERANCES ON:		.0	APPROVED				
VVV ± 005	CTIONS + 1	/32	HEAT TREAT				
VV 1 01	ANGLES ±.		FINISH SPEC				
UNLESS OTHERWIS	SE SPECIFIE	ED	USED ON BEARING				
1. BREAK ALL SH	SEE Pg. 1						
.015 x 45° PR 2. DIMENSIONAL LIMITS API							
SCALE NTS	DATE	6-2	7-08	SHEET	4	of	9



REVISIONS This drawing, specifications, and concepts contained herein are the sole property of INITIAL APPROVED DATE REV Red Barn Machine, and may not be reproduced or used in any fashion without the rior written permission of Red Barn Machine. 3 -1 CH'D TOL.(H) WAS +/-.002 IS +/-.005. 6/17/13 ВІМ ENGRAVE TOOL No. & - .686 -BEARING No.; LETTER HT. .110 .390 (SEE Pg.1 FOR RB OR ST PREFIX) .375 ØA -∕2\ H .030 .060x45° (x3) #8-32 UNC THRD R.016 LENGTH 3/8 MIN. C-BORE Ø.191 .017 O .005 A&B C E **DEPTH OPTIONAL** .015 ØB ØD .500 ØС ØΕ .470 С R.016 **R.046 MAX** В 1.000 .940 ØG 25° SECTION A-A **ROLLER** 25° **NOTES FIXTURE** 1. BREAK ALL SHARP CORNERS (.015/.03). .750 .720 $\sqrt{2}$ DIMENSION TO BOTTOM OF R.016 = H DIM.; DIMENSION TO SHARP CORNER= H DIM.+.005. TOOL# MATERIAL 3. -1 BEARING RACE SUFACES MUST HAVE SMOOTH APPEARANCE, FREE FROM DRILL ROD 2.000 1.771 | 1.624 | 1.278 | 1.016 .146 .131 .153 0-1 Ø2 x 1-3/4 RBST2345 MACHINING MARKS AND GROOVES. 2.500 2.299 2.152 1.806 1.545 0 .131 .153 DRILL ROD Ø2-1/2 x 1-3/4 **RBST2369** 4. DO FIRST ARTICLE INSPECTION BEFORE HEAT TREATING. MACHINE RED BARN TITLE RBST2300 SFRIFS SWAGING TOOL; ROLLER FIXTURE

DWG NO.

TOLERANCES ON: DECIMALS

.XXX ± .005

.XX ± .01

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES

.015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING

STN

DIMENSIONS ARE IN INCHES

FRACTIONS ± 1/32

ANGLES ±.5°

DATE

DRAWN BY:

APPROVED

6-27-08

3

PERRITT

RC 55-60

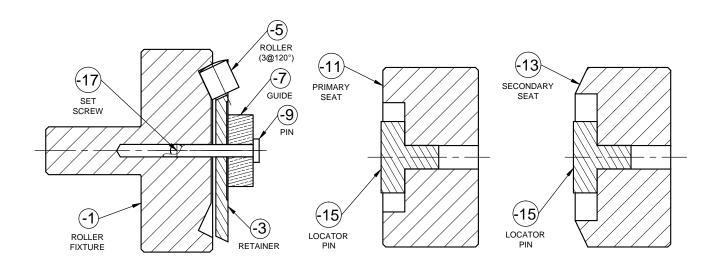
BLACK DXIDE

2 of 9

USED ON BEARING

SEE Pg. 1

REVISIONS												
REV	DESCRIPTION	DATE	INITIAL	APPROVED								
1	CHANGED -5 ROLLER RADUIS FROM .005010, TO .015020; AND -9 PIN RADIUS FROM .015 MAX., TO .015 MIN. ALSO CHANGED -7 SLEEVE TO -7 GUIDE.	7/7/08	WP	DW								
2	ADDED ST2345 INFORMATION, CHANGED -9 FLAT FROM .375400, CHANGED -11 & -13 CENTER DEPTH FROM.228, AND REMOVED "K" FROM ALL TOOL No.'s WITH ENGRAVING NOTES TO CHECK FIRST PAGE FOR PREFIX TO TOOL No.	11/19/08	WP	D₩								
2A	CH'D T/N FROM ST.	11/19/09	RJC									
3	-1 CH'D TOL.(H) WAS +/002 IS +/005.	6/17/13	BIM	GE								



BEARINGS & TOOLS COVERED BEARING # TOOL # 412-310-400-107 RBST2345 412-310-400-107 RBST2345 S251W125-5, CAS12-31A1-518 RBST2369 S251W125-5, CAS12-31A1-518 RBST2369

NOTES

- 1. -5 ROLLERS MUST TURN FREELY IN -3 RETAINER POCKETS.
- 2. -5 ROLLERS & -3 RETAINER MUST TURN FREELY WHEN TOOL IS COMPLETELY ASSEMBLED.
- 3. FLAT END OF ROLLERS MUST FACE TOWARDS THE CENTER OF THE TOOL WHEN ASSEMBLED.

ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	B/O INFORMATION OR SPECIFICATIONS	Pg.
		-1	1	ROLLER FIXTURE	SEE CHART	2
		-3	1	RETAINER	SEE CHART	3
		-5	3	ROLLER	SEE CHART	4
		-7	1	GUIDE	SEE CHART	5
		-9	1	PIN	SEE CHART	6
		-11	1	PRIMARY SEAT	SEE CHART	7
		-13	0 or 1	SECONDARY SEAT	SEE CHART	8
		-15	1 or 2	LOCATING PIN	SEE CHART	9
	B/O	-17	1	SOCKET HEAD SET SCREW	#8-32 x 1/4	N/S

® RED BARN MACHINE

TRI-ROLLER SWAGING TOOLS

DWG NO. REV CHART ABOVE) 3 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DRAWN BY: PERRITT APPROVED TOLERANCES ON: DECIMALS LISTED PER ITEM .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 .X ± .1 LISTED PER ITEM ANGLES ±.5° USED ON BEARING

STN

DATE 6-27-08 SHEET 1 of 9

SEE ABOVE

[REV	DESCRIPTION	DATE	INITIAL	APPR
	_		-	-	_

						1,			V)		® RED BARN MACHINE	
ASS QT	Y ASS Y QTY	Y B/C	PART#	UNIT		DESCRIPTION				MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.	TITLE ——	
			-1	1	RND			X		6061	Ø8-1/4 x 3-7/8	2	DWG NO	RE
						\mathcal{L}	$oldsymbol{\mathcal{X}}$						UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMAL PROVED DECIMAL PROVED	_
							\ '						DECIMALS .XXX ± .005 .XX ± .01 .X ± .01 .X + .00 OT IF DIVISION DECISION USED ON MODEL	
						<u> </u>							UNLESS OF HERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR.015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	_
Г	ASS	Y											$^{\text{SCALE}}$ NTS $^{\text{DATE}}$ 8–15–07 $^{\text{SHEET}}$ 1 c	f

REVISIONS										
REV	DESCRIPTION	DATE	APPROVED							

NOT APPROVED FOR PRODUCTION

			PAR	Т#	QTY	Y DESCRIPTION				
			-1	ı	1					
		DRAWN BY: PERRITT			— \ Г		$D \wedge D M$	$\Lambda \Lambda \Lambda \cap$	LITN	
		CHECKED HEAT_		(<u>RB</u>	1 [2	くヒリ	RAKIN	MAL	$\Box\Box\Box$	
		TREAT FINISH SPEC		TITLE						
[USED ON MODEL	UNLESS OTHERWISE SPECIFIE DIMENSIONS ARE IN INCHES	D							
	?	TOLERANCES ON: DECIMALS .XXX ± .005 EDACTIONS + 1						-		
ł		XX ± .005 FRACTIONS ± 1 .XX ± .01 ANGLES ±.6		DWG 1	NO.		PART	#		REV.
f		UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES)				1 1 11 \ 1	11		
		.015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	3	SCALE		NTS	DATE 1-28-0	06 ^{sheet} :	l of	1